

REMARKS

Claims 1-26 are pending in this application. Claims 2, 9-15, 20, 21, 25 and 26 are directed towards a non-elected species. Claims 2, 9-15, 20, 21, 25 and 26 are withdrawn from consideration in this application. Claims 1, 3-8, 16-19 and 22-24 are rejected in this application. Claims 23 and 24 are rejected under 35 U.S.C. §101 as directed to non-statutory subject matter; claims 1, 16-19, and 23 are rejected under 35 U.S.C. §102(a) as being anticipated by Weld entitled "Recent Advances in AI Planning" ("Weld"); claims 1, 17, 18, and 23 are rejected under 35 U.S.C. §102(a) as being anticipated by Hess entitled "Using Autonomous Software Agents to Create Next Generation of Decision Support Systems" ("Hess"); claim 22 is rejected under 35 U.S.C. §103(a) as being unpatentable over Weld as applied to claim 17; claim 22 is rejected under 35 U.S.C. §103(a) as being unpatentable over Hess as applied to claim 17; claims 1, 3-8, 16-19, and 22-24 are rejected on the ground of non-statutory obviousness-type double patenting as unpatentable over claims 1-10 of U.S. Patent No. 6,992,192. In view of the remarks presented herein, the undersigned respectfully traverses these rejections as set forth below.

Rejection of Claims 23 and 24 under 35 U.S.C. §101

Claims 23 and 24 are rejected under 35 U.S.C. §101 as directed to non-statutory subject matter. The Office Action states:

Claims 23 and 24 fail to expressly recite a practical application; therefore, the usefulness of the invention is unclear. Information is merely collected, distributed, and displayed; however, there is no express recitation of a useful application of this data.

The rejection of independent claim 23 as directed towards non-statutory subject matter is improper. To support this rejection, the Office Action compares the elements of claim 1 stating: "For example, claim 1 recites that similar data is used to determine a plan for achieving at least one or more goals, which is deemed to be useful." While the specific language of claim 1 does support the use of the recited supply chain management system of claim 1, it is not necessary to recite the utility in the language of the claim.

According to the Manual of Patent Examining Procedure (MPEP) §2107, the guidelines for examining an application to determine whether the utility requirement has been sufficiently satisfied to overcome a §101 rejection requires an Examiner to read the claims and the written description. Section 2107 (II)(A)(3) continues by stating:

[i]f at *any time* during the examination, it becomes readily apparent that the claimed invention has a well-established utility, do not impose a rejection based on lack of utility. An invention has a well-established utility if (i) a person of ordinary skill in the art would immediately appreciate why the invention is useful based on the characteristics of the invention (e.g., properties or applications of a product or process), and (ii) the utility is specific, substantial, and credible. (emphasis added).

Section 2107 makes clear that the utility of an invention may be established at any point during the examination, based on any part of the application. This criteria is met as long as a person having ordinary skill in the art would appreciate the utility of the invention.

Specifically, there is no requirement that the utility of the invention be set forth in the language of the claims. As long as the claims are directed to the general method or structure which illustrates some basic utility, a §101 rejection is improper. *See e.g. Moleculon Research Corp. v. CBS, Inc.*, 793 F.2d 1261, 229 USPQ 805 (Fed.Cir. 1986), *cert. denied*, 479 U.S. 1030 (1987).

In the present case, while a specific exemplary use of the supply chain management system is not set forth within the language of claim 23, as is done in the language of claim 1, the utility can be easily ascertained from the specification and would be apparent to a person having ordinary skill in the art.

Thus according to the guidelines as set forth in the MPEP, the §101 rejection of independent claim 23 for lack of utility is improper. Furthermore, since claim 24 is dependent on claim 23, the rejection of claim 24 is also improper. Accordingly, the undersigned respectfully requests that the rejection of both claims 23 and 24 be reconsidered and withdrawn.

Rejection of Claims 1, 16-19, and 23 Under 35 U.S.C. §102(a)

Claims 1, 16-19, and 23 are rejected under 35 U.S.C. §102(a) as being anticipated by Weld entitled "Recent Advances in AI Planning." In order to establish a *prima facie* case of anticipation, the Federal Circuit has stated that "[a]nticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention arranged as in the claim [under consideration]." *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984) (citing *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 220 USPQ 193 (Fed. Cir. 1983)). In this case, the Office Action fails to meet the burden for anticipation under §102(a).

As noted, the reference must disclose each and every element of the claims of the present application. Weld cited in the Office Action fails to meet this burden. In the present application, independent claim 1 provides:

A supply chain management system comprising:

- a knowledge base including expert knowledge about one or more business process domains;
- an inference engine coupled to the knowledge base, the inference engine including a partial order planner;
- a management system that collects and distributes data regarding one or more business processes and determines one or more goals; and
- a graphical user interface system that displays information regarding the one or more business processes;

wherein the inference engine uses the partial order planner to determine a plan for achieving at least one of the one or more goals.

Inter alia, Weld does not disclose a supply chain management system comprising a “graphical user interface system that displays information regarding the one or more business processes” as recited in the present application. While Weld generally discusses certain advances that have been made in the field of planning algorithms, Weld fails to disclose the elements as recited. Weld is focused on an examination of various techniques and algorithms that are used in a planning process. Weld highlights the use of Artificial Intelligence (“AI”) “to build control algorithms that enable an agent to synthesize a course of action that will achieve its goals.” (Weld, p.1). While the general use of a planning algorithms is consistent with the claims of the present application, Weld does not disclose the use of at least the “graphical user interface system.” Further, Weld does not disclose the use of any specific system functioning to interface between the user and the business processes. Failure to disclose at least this element of the independent claim 1 negates the assertion that Weld anticipates claim 1 as well as any claims that depend therefrom.

Regarding independent claim 17 which provides:

A method for conducting supply chain management, the method comprising:
determining a goal for a supply chain participant; and

using a knowledge base to create a plan for meeting the determined goal.

Weld fails to disclose the step of “determining a goal for a supply chain participant.” Weld discusses the state of AI, and while much of the focus is directed toward the use of AI for determining the necessary steps to achieving a *user defined* goal, Weld does not disclose the act of *determining* a goal. For instance, Weld provides an example problem of “preparing a surprise date for one’s sleeping sweetheart.” (Weld, p.3, fig.4). In this example, the goal of preparing the surprise, including the desired actions of “cook,” “wrap,” “carry,” and “dolly” are defined by the user. The AI system is merely used to determine a method for accomplishing the desired goal by determining the appropriate action steps. This is different from the present application in which the “the system includes a knowledge base for storing expert knowledge about one or more business processes... [and] a management system that collects and distributes data regarding one or more business processes and *determines one or more goals....*” (p.10, ll. 7-12, emphasis added). In the present case, not only are the action steps for achieving certain goals determined, but also the goals themselves are determined based on expert knowledge that is stored in the knowledge base system. This is clearly different from Weld. Further, Weld does not disclose determining a goal in the context of supply chain management, where it is necessary to consider multiple sources of data and competing goals, as recited in the present application. As such, the rejection of independent claim 17 as being anticipated by Weld is improper, as well as the rejection of the claims that depend therefrom.

Independent claim 23 provides:

A supply chain management system comprising:
a plurality of intelligent agents, each of the plurality of intelligent agents including:
a knowledge base including expert knowledge about one or more business process domains;
an inference engine coupled to the knowledge base, the inference engine including a partial order planner;
a data management system that collects and distributes data regarding one or more business processes; and
a graphical user interface system that displays information regarding the one or more business processes.

As established in the discussion of independent claim 1, *inter alia*, Weld, does not disclose the use of the use of a “graphical user interface system.” Therefore similarly to claim 1, the Office Action fails to provide a reference disclosing each and every element of independent claim 23 of the present application. Accordingly, the Office Action has failed to meet the burden of establishing a *prima facie* case of anticipation under §102(a) as asserted.

Based on the arguments presented herein, the undersigned offers that independent claims 1, 17, and 23 as well as dependent claims 16 and 18-19 are not anticipated by Weld. Thus, the undersigned kindly request that the rejection of claims 1, 16-19, and 23, rejected under 35 U.S.C. §102(a) as being anticipated by Weld, be reconsidered and withdrawn.

Rejection of Claims 1, 17, 18, and 23 Under 35 U.S.C. §102(a)

Claims 1, 17, 18, and 23 are rejected under 35 U.S.C. §102(a) as being anticipated by Hess entitled “Using Autonomous Software Agents to Create Next Generation of Decision Support Systems” (“Hess”). Hess fails to disclose each and every element of independent claims 1, 17, and 23 as well as the claims that depend therefrom. *Inter alia*, Hess fails to disclose the respective supply chain management systems in independent claims 1 and 23

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comprising “a graphical user interface system that displays information regarding the one or more business processes.” Further, regarding the method recited in independent claim 17, Hess fails to disclose “determining a goal for a supply chain participant.” While Hess offers a general overview of decision making software, there is no discussion of the specific elements as recited in the present application.

Hess fails to disclose each and every element of claims 1, 16-19, and 23.

Specifically, Hess fails to teach all of the elements of independent claims 1, 17, and 23, and therefore also fails to teach the all of the elements of dependent claims 16 and 18-19. Since Hess does not teach each and every element of the claims, the Office Action has failed to meet its burden for showing anticipation under §102(a). Thus, the undersigned kindly request that the rejection of claims 1, 16-19, and 23, rejected under 35 U.S.C. §102(a) as being anticipated by Hess, be reconsidered and withdrawn.

Rejection of Claim 22 Under 35 U.S.C. §103(a) In View of Weld

Claim 22 is rejected under 35 U.S.C. §103(a) as being unpatentable over Weld, as applied to claim 17 above. To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found

in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed.Cir.1991) MPEP §2142.

Regarding this rejection, the Office Action states:

Weld does not expressly teach that the knowledge base includes one or more concept graphs; however, Official Notice is taken that the use of concept graphs to perform business analysis is old and well-known in the art of business management. They facilitate more efficient assessment of knowledge in relation to various concepts. Since Weld is directed toward decision-making based on information gleaned from a knowledge base, the Examiner submits that it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify Weld to utilize concept graphs to help create a plan for meeting a determined goal in order to facilitate more efficient assessment of available knowledge in relation to the determined goal.

In this case, while the Office correctly notes that Weld does not expressly teach the element of a knowledge base including one or more concept graphs, the Office opts to take "Official Notice" of the missing elements. Section 2144 of the MPEP offers the following guidance regarding the use of official notice in a rejection:

It would not be appropriate for the examiner to take official notice of facts without citing a prior art reference where the facts asserted to be well-known are not capable of instant and unquestionable demonstration as being well-known. (emphasis in the original)

The Office Action does not identify a prior art reference where the facts asserted to be well-known are "capable of instant and unquestionable demonstration as being well-known" as required by the MPEP. Therefore, taking official notice of elements missing from a cited prior art reference, absent support that the missing elements are in fact well-known, is not an appropriate shortcut for finding all of the elements (and a teaching, suggestion, or motivation to combine the elements) in the cited prior art reference.

Given that it is not appropriate to take official notice in this case, the undersigned is not required to traverse improperly taken notice. To require traverse in such a case would amount to improper burden shifting where no *prima facie* case of unpatentability has been stated.

Thus, the rejection of claim 22 as being obvious under §103(a) in view of Weld and the official notice taken by the Office is improper. Accordingly, it is respectfully requested that the rejection of claim 22 under 35 U.S.C. §103(a) be reconsidered and withdrawn.

Rejection of Claim 22 Under 35 U.S.C. §103(a) In View of Hess

Claims 22 is rejected under 35 U.S.C. §103(a) as being unpatentable over Hess, as applied to claim 17 above. The Office Action states:

Hess does not expressly teach that the knowledge base includes one or more concept graphs; however, Official Notice is taken that the use of concept graphs to perform business analysis is old and well-known in the art of business management. They facilitate more efficient assessment of knowledge in relation to various concepts. Since Hess is directed toward decision-making based on information gleaned from a knowledge base, the Examiner submits that it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify Weld to utilize concept graphs to help create a plan for meeting a determined goal in order to facilitate more efficient assessment of available knowledge in relation to the determined goal.

Again, the Office Action fails to take proper official notice of elements recited in the present application that are missing from Hess (see discussion regarding official notice *supra*).

Therefore, the rejection of claim 22 as obvious under §103(a) in view of Hess and independent claim 17 is not appropriate. It is respectfully requested that the rejection of claim 22 under 35 U.S.C. §103(a) be reconsidered and withdrawn.

Rejection of Claims 1, 3-8, 16-19, and 22-24
Under Non-statutory Obvious-Type Double Patenting

Claims 1, 3-8, 16-19, and 22-24 are rejected on the ground of non-statutory obviousness-type double patenting as unpatentable over claims 1-10 of U.S. Patent No. 6,992,192 ("the '192 patent"). Regarding this rejection, the Office Action states:

Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1, 3-8, 16-19, and 22-24 in the instant application are fully anticipated by the language recited in claims 1-10 of U.S. Patent No. 6,992,192. Elimination of an element or its functions is deemed to be obvious over prior art teachings that are all-inclusive of recited claim elements. See *In re Karlson*, 136 USPQ 184, 186; 311 F2d 581 (CCPA 1963).

The undersigned submits that the limitations of the claims of the present application are not explicitly recited in the '192 patent. Accordingly, the undersigned submits that a *prima facie* case has not been established since there is no teaching provided for the presently recited limitations.

The undersigned will consider filing a terminal disclaimer once the claims have been indicated as being allowable over the non co-owned prior art.

CONCLUSION

With consideration of the above remarks, the undersigned submits that this application is in condition for allowance, and such disposition is earnestly solicited. If the Examiner believes that the prosecution might be advanced by discussing the application with the undersigned, in person or over the telephone, we would welcome the opportunity to do so. In addition, if any additional fees are required in connection with the filing of this response, the Commissioner is hereby authorized to charge the same to Deposit Account No. 501458.


Respectfully submitted,

Date:

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